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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,086	09/26/2001	William E. Richeson	TEK01 P-333	2451
277	7590	03/25/2005	EXAMINER	
PRICE HENEVELD COOPER DEWITT & LITTON, LLP			ROJAS, BERNARD	
695 KENMOOR, S.E.			ART UNIT	
P O BOX 2567			PAPER NUMBER	
GRAND RAPIDS, MI 49501			2832	

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

### Office Action Summary

Application No.

09/964,086

Applicant(s)
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RICHESON, WILLIAM E.

**Examiner**

Bernard Rojas

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on *20 December 2004*.  
 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.  
4a) Of the above claim(s) 23-32 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-22 is/are allowed.
- 6) ☒ Claim(s) 32-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 32-34 and 36-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soileau et al. (US 4,601,765).

Claims 32 and 33, the claim does not positively recite any brake structure therefore the use language of the electromagnet as part of a brake has not been given any patentable weight. Soileau et al. discloses an electromagnet with a powder metal core and housing [4, 5] containing a coil [2] with a bobbin [3].

Soileau et al. fails to teach the thickness of the rim of the housing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the thickness of the rim of the housing, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Adjusting the rim of the housing will change it's strength and thermal characteristics.

Claim 34, it would have been an obvious to one of ordinary skill in the art at the time the invention was made to use a polymeric material of polyethylenesultide, epoxy,

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and phenolic, since applicant has not disclosed that this material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with polyurethane and a natural or synthetic rubber.

Claim 36, Soileau et al. discloses an electromagnet with a polymer impregnated powder metal core [4, 5] containing a coil [2] with a moldable material [3] covering at least a portion of the core, the electromagnet having a magnetic cross section that is constant to within plus or minus three percent [figure 1].

Claim 37, it would have been an obvious one of ordinary skill in the art at the time the invention was made to use a donor material with an elasticity greater than about 2 million psi, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the plastic disclosed.

Claim 38, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). By changing the composition of the powder metal core will change the magnetic characteristics of the electromagnet.

Claim 39, it would have been an obvious one of ordinary skill in the art at the time the invention was made to use polyphenylene sulfide as a donor material, since applicant has not disclosed that this specific donor material solves any stated problem

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or is for any particular purpose and it appears that the invention would perform equally well with the plastic donor material disclosed.

Claims 40 and 41, the claim does not positively recite any brake structure therefore the use language of the electromagnet as part of a brake has not been given any patentable weight. Soileau et al. discloses an electromagnet with a polymer impregnated powder metal core [4, 5] containing a coil [2] with a moldable material [3] covering at least a portion of the core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a powder core strength within a certain range to adjust the strength of the core depending on the environment for which it is used, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 42, it would have been an obvious one of ordinary skill in the art at the time the invention was made to use a donor material with an elasticity greater than about 2 million psi, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the plastic disclosed.

Claim 43, it would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272,

205 USPQ 215 (CCPA 1980). By changing the composition of the powder metal core will change the magnetic characteristics of the electromagnet.

Claim 44, Soileau et al. discloses an electromagnet with a polymer impregnated powder metal core [4, 5] containing a coil [2] with a moldable material [3] covering at least a portion of the core.

Claims 45 and 48, Soileau et al. discloses the claimed invention with the exception of the specific material used and it's elasticity of the moldable material. It would have been an obvious matter of design choice to use a donor material with an elasticity greater than about 2 million psi, since applicant has not disclosed that this specific donor material solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the plastic disclosed.

Claim 46, Soileau et al. discloses the claimed invention with the exception of the powder metal core yield strength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a powder core strength within a certain range to adjust the strength of the core depending on the environment for which it is used, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Claim 47, Soileau et al. discloses the claimed invention with the exception of the elasticity of the powder metal core. It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the composition of the powder metal to a specific Young's modulus, since it has been held that discovering an

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optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). By changing the composition of the powder metal core will change the magnetic characteristics of the electromagnet.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Soileau et al. (US 4,601,765) in view of Groove (US 3,753,182).

Claim 35, Soileau et al. discloses the claimed invention with the exception of a bobbin made from glass fibers.

Grove discloses electromagnet containing a powder metal housing, a coil [64] and a bobbin [70] made of glass fibers [col. 3 lines 50-55] for use in a brake.

It would have been obvious to one of ordinary skill in the art at the time the invention was made use the glass fiber bobbin of Grove in order to improve the heat resistance of the bobbin in the electromagnet Soileau et al. since glass fibers are an excellent insulator.

#### ***Allowable Subject Matter***

Claims 1-22 are allowed.

#### ***Response to Arguments***

Applicant's arguments, see the amendment, filed 12/20/2004, with respect to the rejection(s) of claim(s) 32-47 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the prior art of record in

combination with the claim language. The remaining claims do not positively recite any brake structure therefore the use language of the electromagnet as part of a brake has not been given any patentable weight.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Rojas whose telephone number is (571) 272-1998. The examiner can normally be reached on M-F 8-4:00), every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on (571) 272-1990. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for



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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Bernard Ryzar*  
BR

*CEW*  
RE-AI2832  
3/21/05